

1     **CLAIMS**

2             What is claimed is:

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4             1. A method for upgrading documents for processing by processing functionality,  
5 comprising:

6                 inputting a structured document having particular features associated therewith  
7 into a particular version of the processing functionality;

8                 determining whether each of the particular features matches a set of expected  
9 features associated with the particular version of the processing functionality; and

10                modifying the particular features of the input structured document so that the  
11 particular features match the set of expected features to thereby provide a modified  
12 structured document.

13  
14             2. A method according to claim 1, further comprising:

15                 transforming the modified structured document into another document suitable for  
16 presentation;

17                 displaying the other document suitable for presentation using the processing  
18 functionality to provide a displayed document; and

19                 editing the displayed document.

20  
21             3. The method according to claim 1, wherein the input structured document is  
22 expressed in a markup language that uses tags pertaining to subject matter fields in the  
23 input structured document.

1           4. The method according to claim 3, wherein the input structured document is  
2 expressed in the extensible markup language (XML).

3  
4           5. The method according to claim 2, wherein the other document suitable for  
5 presentation is expressed in a markup language that uses tags pertaining to visual features  
6 associated with the presentation of the other document.

7  
8           6. The method according to claim 5, wherein the other document suitable for  
9 presentation is expressed in the hypertext markup language (HTML).

10  
11           7. The method according to claim 1, wherein the modifying uses an upgrade  
12 module that provides a transformation function using extensible stylesheet language  
13 (XSL).

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15           8. The method according to claim 2, wherein the other document suitable for  
16 presentation comprises an electronic form having at least one user data entry field therein.

17  
18           9. The method according to claim 1, wherein the determining of whether each of  
19 the particular features matches a set of expected features associated with the particular  
20 version of the processing functionality comprises:

21           determining whether the input structured document contains each node expected  
22 by the particular version of the processing functionality.

1           10. The method according to claim 9, wherein the modifying of the particular  
2 features of the input structured document to produce the modified structured document  
3 comprises:

4           creating each node expected by the particular version of the processing  
5 functionality to provide created nodes;

6           copying node content from the input structured document into corresponding  
7 created nodes in the modified structured document for those nodes in the input structured  
8 document that have counterpart nodes expected by the particular version of the  
9 processing functionality; and

10          creating default node content in corresponding nodes in the modified structured  
11 document for those created nodes that do not have counterpart nodes in the input  
12 structured document.

13  
14          11. The method according to claim 1, wherein the determining of whether each of  
15 the particular features matches a set of expected features associated with the particular  
16 version of the processing functionality comprises:

17          determining whether the input structured document lacks nodes that were  
18 previously classified as optional but are no longer classified as optional in the particular  
19 version of the processing functionality.

20  
21          12. The method according to claim 11, wherein the modifying of the particular  
22 features of the input structured document to produce the modified structured document  
23 comprises:

24          creating new nodes in the modified structured document providing that the new  
25 nodes are lacking in the input structured document and providing that the new nodes are

1 required in the particular version of the processing functionality although considered  
2 optional by its schema.

3  
4 13. The method according to claim 1, wherein the expected features are specified  
5 by a schema associated with the particular version of the processing functionality.

6  
7 14. The method according to claim 1, wherein the expected features are specified  
8 by some information other than a schema associated with the particular version of the  
9 processing functionality.

10  
11 15. The method according to claim 1, wherein the input structured document  
12 corresponds to a markup language document generated by an earlier version of the  
13 processing functionality compared to the particular version.

14  
15 16. The method according to claim 1, wherein the input structured document  
16 corresponds to a markup language document generated by a later version of the  
17 processing functionality compared to the particular version.

18  
19 17. The method according to claim 1, wherein the modifying is performed using  
20 an upgrade module, and wherein the upgrade module is developed without knowledge of  
21 any requirements of any input structured document.

22  
23 18. An apparatus including logic configured to implement the inputting,  
24 determining, and modifying recited in claim 1.

1           19. A computer readable medium having machine readable instructions for  
2 implementing the inputting, determining, and modifying recited in claim 1.

3  
4           20. A method for generating an upgrade module for upgrading documents for  
5 processing by processing functionality, comprising:

6           determining whether a particular version of the processing functionality has been  
7 created that warrants generation of the upgrade module; and

8           generating the upgrade module if the creation of the particular version warrants  
9 the generation of the upgrade module.

10  
11           21. The method of claim 20, wherein the upgrade module is formed using the  
12 extensible stylesheet language (XSL).

13  
14           22. An apparatus including logic configured to implement the determining and  
15 generating recited in claim 20.

16  
17           23. A computer readable medium having machine readable instructions for  
18 implementing the determining and generating recited in claim 20.

19  
20           24. An apparatus for processing documents, comprising:

21           an upgrade module configured to modify an input structured document having  
22 particular features associated therewith so that the input structured document conforms to  
23 a set of expected features associated with a particular version of the apparatus, to thereby  
24 produce a modified structured document; and

1 a transformation module configured to transform the modified structured  
2 document into another document suitable for presentation.

3  
4 25. An apparatus for generating an upgrade module for upgrading documents for  
5 processing by processing functionality, comprising:

6 logic configured to determine whether a particular version of the processing  
7 functionality has been created that warrants generation of the upgrade module; and

8 logic configured to generate the upgrade module if the creation of the particular  
9 version warrants the generation of the upgrade module.

10  
11 26. A computer readable medium having stored thereon an information structure,  
12 comprising:

13 an upgrade module information structure configured to modify an input  
14 structured document having particular features associated therewith so that the input  
15 structured document conforms to a set of expected features associated with a particular  
16 version of a processing apparatus, to thereby produce a modified structured document;  
17 and

18 a transformation module information structure configured to transform the  
19 modified structured document into another document suitable for presentation